Comparing Utilization, Cost and Quality in Dual Eligible Medicare Advantage and Fee-For-Service Medicare Beneficiaries

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Background

- The clinical characteristics and care needs of older adults are changing over time. More than half of the Medicare population has 4 or more chronic conditions
- Effectively managing the delivery of care for Medicare beneficiaries with multiple chronic conditions has the potential to improve the quality of life for these beneficiaries while reducing Medicare spending
- As policymakers look to encourage value-driven, cost-effective, quality care delivery models, there is growing interest in comparing traditional Fee-for-Service (FFS) Medicare and Medicare Advantage (MA)
- To date, there is little comprehensive information on the performance of MA compared to FFS due in part to a lack of access to comparable MA encounter data

Objective

To compare healthcare utilization, cost, and quality outcomes across 2 large national samples of dual eligible MA and FFS Medicare beneficiaries with 1 or more of 3 chronic conditions selected from the top-5 conditions based on prevalence in the Medicare population: hypertension, hyperlipidemia, diabetes.

Methods

Data Source

- A descriptive cross-sectional cohort design was used to analyze a sample of 1,581,822 MA beneficiaries extracted from a proprietary, statistically de-identified registry, and a sample of 1,212,698 FFS Medicare beneficiaries extracted from Medicare Standard Analytic Files
- The proprietary database includes longitudinal patient-level data for more than 160 million individual health plan members from a broad range of sources across all payer types (commercial, ACA exchange, MA, and managed Medicaid), geographic regions (capturing virtually all US counties), healthcare settings (inpatient, office-based, and outpatient services), and provider specialties

Study Population

- To be eligible for inclusion in the study, Medicare beneficiaries were required to be continuously enrolled in the same health plan with medical and pharmacy benefit coverage for the 12-month reporting period from January 1, 2015 to December 31, 2015 (with the standard allowable gap of no more than 45-days, consistent with Healthcare Effectiveness Data and Information Set (HEDIS) and CMS definitions)
- Patients were eligible for inclusion in a particular chronic condition category if they were diagnosed within the measurement year of 2015

Data Analysis and Outcomes

- Descriptive statistics were reported on the following factors separately for MA and FFS Medicare and further stratified by dual eligible status including:
  - Demographics - age group, gender, race/ethnicity, census region
  - Clinical characteristics - Charlson Comorbidity Index scores, co-occurring chronic conditions
  - Healthcare services utilization (per 1,000 members per year) for hospitalizations, emergency room use, observation stays, length of stay, and office visits
- Quality measures evaluated:
  - Breast cancer screening (BCS)
  - Potentially preventable hospitalizations (HPC total, chronic and acute)
  - 30-day all cause readmissions (PCR)
  - Cardiovascular monitoring: LDL testing
  - Comprehensive diabetes care: HbA1c testing, and measures of diabetes patients with lower extremity complications including cellulitis, ulceration, osteomyelitis, gangrene, amputation, serious complications and any complication
- Healthcare costs were calculated on a per-member per-month (PMPM) basis overall and within expenditure categories including inpatient, outpatient, physician services and tests, and durable medical equipment
- Standardized costs were derived by applying pricing algorithms based on Medicare allowed amounts for services. This accounts for differences in pricing across geographic areas, health plan and provider negotiated contracts and other price differentials
- This approach applies consistent standardized costs to all medical encounters (e.g., hospitalization, ER visit, physician visit, lab test, outpatient procedure, etc.) and thus supports direct comparisons to FFS Medicare costs

Results

Table 1: Characteristics of Medicare Advantage and FFS Medicare Beneficiaries

	Medicare Adv.		FFS Medicare	
Description	**Dual**		**Dual**	
Number of Members	163,789		243,036	
Member Characteristics	N	%	N	%
Age (Years): *				
0 – 54	18,446	11.3%	56,049	23.1%
55 – 64	22,223	13.6%	46,225	19.0%
65 – 69	29,766	18.2%	36,040	14.8%
70 – 74	30,560	18.7%	29,108	12.0%
75 – 79	24,694	15.1%	25,575	10.5%
80 – 84	18,283	11.2%	21,213	8.7%
≥ 85	19,817	12.1%	28,826	11.9%
Gender				
Female	108,259	66.1%	151,102	62.2%
Male	55,530	33.9%	91,934	37.8%
Race/Ethnicity				
Known	162,013	98.9%	240,911	99.1%
White	86,410	53.3%	159,921	65.8%
Black or African American	37,133	22.9%	47,512	19.5%
Asian	7,828	4.8%	11,680	4.8%
Hispanic or Latino	23,962	14.8%	14,963	6.2%
Other Race	6,680	4.1%	6,835	2.8%
Unknown	1,776	1.1%	2,125	0.9%
Census Region:				
Northeast	144,310	88.1%	51,348	21.1%
Midwest	9,472	5.8%	49,962	20.6%
South	8,471	5.2%	97,037	39.9%
West	1,536	0.9%	44,689	18.4%
Original Reason for Entitlement:				
Known	163,781	100.0%	243,036	100.0%
Age	98,289	60.0%	108,600	44.7%
Disability	65,313	39.9%	129,165	53.1%
ESRD	139	0.1%	2,237	0.9%
Disability and ESRD	40	0.0%	3,034	1.2%
Unknown	8	0.0%	-	-
Number of Chronic Conditions:*				
1	4,603	2.8%	9,125	3.5%
2	12,188	7.4%	19,603	10.2%
3	19,842	12.1%	28,100	16.2%
4	24,517	15.0%	32,018	17.9%
5	25,291	15.4%	31,685	16.0%
6	21,795	13.3%	28,493	12.2%
7	17,129	10.5%	24,200	8.7%
8 - 9	21,634	13.2%	35,010	9.5%
10+	16,790	10.3%	34,802	5.8%
Charlson Comorbidity Index: *				
0	25,752	15.7%	38,557	15.9%
1	31,184	19.0%	47,065	19.4%
2	24,218	14.8%	36,600	15.1%
3	32,326	13.6%	32,058	13.2%
4	16,849	10.3%	23,760	9.8%
≥ 5	43,460	26.5%	64,996	26.7%

Table 2: Utilization Rates in Dual Eligible Medicare Advantage and FFS Beneficiaries

Utilization per 1,000 Beneficiaries	Medicare Advantage Dual Eligible Beneficiaries	FFS Medicare Dual Eligible Beneficiaries	Differential
Hospitalizations	56.2%	39.2%	16.3%
(Inpatient Stays)	346	516	-32.9%
Length of Stay (Average)	13	13	0.0%
Emergency Room Visits	822	1,419	-42.1%
Office Visits	7,907	7,076	+11.7%

Note: Differential percentages may vary due to rounding.

Figure 1. Healthcare Costs for Dual and Non-Dual Eligible Beneficiaries in Medicare Advantage and FFS Medicare Study Populations

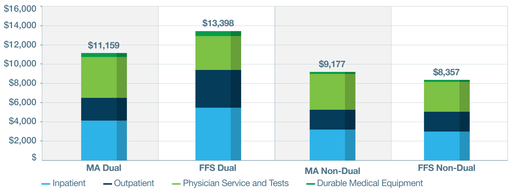

Table 3: Rates of Preventative Screenings, Test, and Complications in Dual Eligible Medicare Advantage and FFS Medicare Beneficiaries

Quality Measure	Medicare Advantage Dual Eligible Beneficiaries	FFS Medicare	Differential
Adults access to preventive / ambulatory health services	99.6%	98.4%	+1.2%
Cardiovascular Monitoring: LDL Testing	81.5%	69.4%	+17.4%
Comprehensive Diabetes Care: HbA1c Testing	91.8%	91.5%	+0.3%
Breast Cancer Screening	73.1%	50.0%	+46.2%
Diabetes Patients Who Have Lower Extremity Complication: Serious Complication	2.0%	6.9%	-71.0%
Diabetes Patients Who Have Lower Extremity Complication: Any Complication	9.9%	19.4%	-49.0%

Note: The denominators for the diabetes complications measures were smaller in the Medicare FFS population due to fewer beneficiaries with diabetes who qualified for inclusion in the measure based on the technical specifications, but statistical significance tests showed the rates to be statistically different based on the patients who were included in the measure (all p-values <.001). Differential percentages may vary due to rounding.

Table 4: Rates of Potentially Avoidable Hospitalizations and Readmissions in Dual Eligible Medicare Advantage and FFS Medicare Beneficiaries

Quality Measure	Medicare Advantage Dual Eligible Beneficiaries	FFS Medicare Dual Eligible Beneficiaries	Differential
Potentially Avoidable Hospitalizations: Chronic Rate	17.2%	17.3%	-0.6%
Potentially Avoidable Hospitalizations: Acute Rate	3.6%	7.0%	-48.6%
Potentially Avoidable Hospitalizations: Overall Rate	19.2%	25.3%	-24.1%
Readmissions Rate	9.9%	8.6%	+15.1%

Note: Note: Differential percentages may vary due to rounding.

Key Findings

Utilization (Table 2)

Dual eligible MA beneficiaries had:

- 11.7% more office visits compared to dual eligible FFS Medicare beneficiaries
- 32.9% lower rates of hospitalizations compared to dual eligible FFS Medicare beneficiaries, but similar LOS
- 42.1% fewer emergency room visits compared to dual eligible FFS Medicare beneficiaries

Cost of Care (Figure 1)

- Total cost of care for dual eligible beneficiaries was 16.7% higher in FFS Medicare compared to MA
  - This was driven by higher spending on hospital inpatient and outpatient services in FFS Medicare
  - MA spending was higher on physician services and tests in the dual eligible population compared to FFS Medicare
- FFS Medicare costs were 9.8% lower than MA for non-dual eligible beneficiaries
  - This was driven by lower FFS spending on physician services and tests in Medicare Advantage

Preventive Screenings, Tests, and Complications (Table 3-4)

- Dual eligible MA beneficiaries with diabetes had significantly lower rates of complications, including
  - 49.0% fewer complications overall
  - 71.0% fewer serious complications
- Dual eligible MA beneficiaries received more preventive care services than dual eligible FFS Medicare beneficiaries, including a 17.4% higher rate of LDL testing
- Rates of HbA1c testing were similar for dual eligible beneficiaries in MA and FFS Medicare
- Only half of dual eligible FFS Medicare beneficiaries received preventive breast cancer screenings compared to 73.1% of dual eligible MA beneficiaries
- Dual eligible beneficiaries in the MA population had a 24.1% lower rate of potentially avoidable hospitalizations and had about half as many potentially avoidable acute hospitalizations
- Dual eligible FFS Medicare beneficiaries had 15.1% lower rates of readmissions

Discussion

- MA outperformed FFS Medicare in caring for dual eligible beneficiaries with chronic conditions on:
  - Utilization, cost, and quality
- Dual eligible beneficiaries in the MA study population experienced significantly lower rates of complications and avoidable hospitalizations
- Dual eligible MA beneficiaries received more preventive care services compared to dual eligible FFS Medicare beneficiaries
- While the MA and FFS Medicare study populations were distributed similarly by age and gender, the Medicare Advantage population had a higher proportion with social and clinical risk factors, including:
  - more dual eligible/low income beneficiaries,
  - more beneficiaries who enrolled in Medicare under age 65 due to disability, and
  - higher rates of serious mental illness and alcohol/drug/substance abuse
- MA also had larger proportions of racial/ethnic minorities enrolled compared to FFS Medicare.
- These factors have been shown to be associated with greater disease burden, higher needs, increased spending, and worse outcomes
- This context is important to consider in interpreting the unadjusted results and findings of this study
- As results were not adjusted to account for the higher prevalence of risk factors in the MA population, these findings may underestimate the performance of MA relative to FFS Medicare

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